Amendments to the Specification

Please substitute the following paragraph for the paragraph **[0015]** currently pending in the application:

Figure 3 schematically illustrates a single-strap embodiment of a RF cup-coil **2**, wherein an arcuate strap **10** is connected to a base ring **12** and passes through an imaginary central axis **18** of the base ring **12**. As noted above, the term "arcuate" is meant to encompass non-hemispherical shapes such as, for example, rectangles, ellipses, parabolas, or other shapes. Strap **10** is directly connected to base ring **12** at one end at point C **20**, and electrically connected to base ring **12** through tuning capacitors C_{MA}, C_{MB} **14** bridging the gaps **26** between its other end (point D **22**) and two segments including component points A **17** and B **19**, respectively, of base ring **12**. The strap **10** and base ring **12** can be implemented with microstrip conductor lines (*e.g.*, copper) or any other conducting material, and are dimensioned so as to receive the anatomical region of interest (*e.g.*, a human breast.) The capacitors C_A, C_B, C_C **16** and the inherent inductances L_{1A}, L_{2B}, L_{3C} of the segments of microstrip lines form a resonance system that can be tuned to a particular resonance frequency based on the requirement of the main magnet system of the magnetic resonance (MR) instrument. In order to tune the cup-coil **2** efficiently, fixed and tunable capacitors C_A, C_B, C_C **16** are deployed at strategically selected cuts **24** in the microstrip segments comprising strap **10** and base ring **12**. The selection and adjustment of tuning capacitors C_{MA}, C_{MB} **14** is based upon the resonance requirement of the cup-coil at a desired frequency. For instance, the capacitors C_{MA}, C_{MB} **14** can be adjusted such that a resonance frequency of 63.87MHz is achieved, consistent with a 1.5T main magnetic field of a MR system for proton imaging. Other magnetic field strengths can be implemented, such as 3T and higher. Capacitors C_A, C_B, C_C **16** can be selected and/or adjusted such that their reactances compensate the inherent inductive reactances of the cup coil the cup-coil **2**, and such that together with the microstrip inductances L_{1A}, L_{2B}, L_{3C} , the desired resonance frequency is obtained. They also reduce eddy currents that would result as a consequence of the switching gradients of the MR system. The reactance associated with capacitor C_{3C} should be chosen such that it compensates for the inductance associated the inductance L_{3C} of the upper strap.

Please substitute the following paragraph for the paragraph **[0016]** currently pending in the application:

Figures 4A and **4B** illustrate, respectively, the two modes ($Mode_0$, $Mode_1$) of operation available in the single-strap RF cup-coil **2** and the magnetic fields associated therewith. In $Mode_0$, no current flows through strap **10** while a current I **26** induced in the base ring **12** by the magnetic flux density travels around the annular base ring **12** along current path A-C-B-D. In $Mode_1$, a 90° phase shifted current 2I **30** is induced in the strap **10** and is divided symmetrically into two currents I **32** between two halves of the base ring **12** (or vice versa) along current paths D-A-C and D-B-C respectively. **Figures 4A and 4B** include Cartesian xyz-space axes that help illustrate how t~~T~~he superposition of the modes establishes a rotating magnetic field phasor B_{RF} **6** (shown in **Figure 4C**) orthogonal to the uniform static uniform field B_0 **8** (shown in **Figure 2**) of the MR instrument.

Please substitute the following text for the text in paragraph **[0018]** currently pending in the application up to the sentence beginning "Specifically, the resonance...":

Figure 6A presents an electronic equivalent circuit **40** of the single-strap RF cup coil **2** depicted in **Figure 3**. Nodes A-D in circuit **40** correspond to the identically labeled points in the schematic model of the cup-coil **2** shown in **Figure 3**. Electrical losses in the cup-coil **2** are represented in the model circuit by resistors R_{1A}, R_B and R_C ~~through R_3~~. In circuit **40**, capacitors C_A, C_B, C_C represent the fixed and tunable capacitors **16** described above, inductances L_A, L_B, L_C represent the inherent inductances of the segments of the microstrip lines, and C_{MA} and C_{MB} represent the tuning capacitors **14** bridging the gaps between the arcuate conductor and two segments of the base ring conductor. The operational and dimensional specifications of a single-strap RF cup-coil implemented using standard fixed and variable capacitors on a dielectric "former" are reflected in **Figure 6B**, wherein the reference characters correspond to the tuning capacitors, fixed and tunable capacitors and component points described above, and in **Table One** and **Table Two**.